

Work Order ID 125830

125830

Page 1

Wednesday, October 22, 2014 12:36:34 PM

Item ID: D212-722-013

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Fastener Brace

Start Date: 10/14/14 Start Qty: 16.00

16

Cust Item ID:

Required Date: 10/21/14 Req'd Qty: 16.00

16

Customer:

Reference:

Run Start

NR1

Approvals: Process Plan: MVS Date: 14-10-23 Tooling: _____ Date: _____

Stop

NR2

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9476	A	<i>M.P.</i>							

100

Document Control

0.00

100

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopie DSI 9476 and labels per PPP D212-722-013 CHG001

16x

DAS
28
9-89

APR 15 2015

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

APR 14 2015

M.P.

DAS
86
9-89

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.00

Quality Control

16x

DAS
28
9-89

APR 15 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 125830***125830***

Page 2

Wednesday, October 22, 2014 12:36:34 PM

Item ID: D212-722-013

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fastener Brace

Start Date: 10/14/14 Start Qty: 16.00

16

Cust Item ID:

Required Date: 10/21/14 Req'd Qty: 16.00

16

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D212-722-013								
	Location: _____								
	PPP rev: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

PPP 125666

(16x)

DAS
46
9-89

APR 17 2015

15/4/22

MCS 1504-21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Equip/Tooling									
Handling/Pre									
Material									
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Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Wednesday, October 22, 2014 12:36:33 PM

125830

D212-722-013

Required Qty: 16.00

Comments: IPP revA 11.06.21 new issue EC verified by:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	DAS 06 9-89
D3986-1		Manufactured	No			110	Each	12.0000	1	16				
D3986-1														
Angle														
	DAS			<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>						
	28			ST075		12								
	9-89			119434		8								
				120022		4								
D3986-3		Manufactured	No			110	Each	17.0000	2	32				
D3986-3														
Brace														
	DAS			<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>						
	28			ST075		17								
	9-89			113042		8								
				120023		9								

APR 14 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D212-722 REV. A

REF. TCCA STC: SH05-11

REF. FAA STC: SR02091NY

REF. EASA IM.R.S.01181

The purpose of the Service Instruction is to provide instructions for the installation of the D212-722-013 Dzus Rail Brace Kit which has been developed to provide a fastening method for the center dzus rail when the D212-722-011 Avionics Riser Console is installed. The D212-722-013 kit has been added to all D212-722-011 kits at CHG 003 or later.

If the aircraft pedestal has been removed from the aircraft follow the instructions in Option 1. If the pedestal has not been removed from the aircraft follow instructions in Option 2 (Sheet 2).

The maximum weight of equipment installed in front of the D212-722-011 Avionics Riser Console using the D212-722-013 Kit is 40 lbs.

Option 1 - Install D212-722-013 Dzus Rail Brace Kit as follows if pedestal has been removed from aircraft:

Note: The existing PR35 center dzus rails will need to be removed and re-worked to the correct length in order to install the D212-722-013 Dzus Rail Brace Kit.

CAUTION: Alignment of the parts is critical to a successful installation. It is strongly recommended that the parts be clamped together before drilling and then clecoed together before riveting.

- 1) Remove the rivets securing the existing center PR35 dzus rails.
- 2) Remove the existing center dzus rail braces.
- 3) Clamp the D3986-1 angle, D3986-3 braces and PR35 dzus rail together as shown in Figure 1 (Sheet 3). The D3986-3 braces should be approximately centered between the existing dzus rails.
- 4) Install blanking plates (Figure 5, Sheet 7) to position the PR35 dzus rails in the correct position.
- 5) Transfer drill 9x $\varnothing 0.129$ (#30 drill) holes from PR35 dzus rail thru D3986-3 braces. See Figure 2, (Sheet 4), Note 1.
- 6) Deburr holes and reassemble using clecos.
- 7) Transfer drill 4x $\varnothing 0.129$ (#30 drill) holes from D3986-3 braces to D3986-1 angle. See Figure 2, (Sheet 4), Note 2.
- 8) Deburr holes and reassemble using clecos.
- 9) Transfer drill 4x $\varnothing 0.129$ (#30 drill) holes from aircraft pedestal to D3986-3 braces. See Figure 2, (Sheet 4), Note 3.
- 10) Deburr holes, dimple D3986-3 brace and aircraft pedestal and reassemble using clecos.
- 11) Transfer drill 4x $\varnothing 0.129$ (#30 drill) holes from D3986-1 angle to aircraft pedestal. See Figure 2, (Sheet 4), Note 4.
- 12) Deburr holes, dimple D3986-1 angle and aircraft pedestal and reassemble using clecos.
- 13) Re-install blanking plates (Figure 5, Sheet 7) and verify correct position of PR35 dzus rails.
- 14) Install MS20470AD4 and MS20426AD4 rivets as shown in Figure 2 (Sheet 4) in the same order as the holes were drilled, maintaining the PR35 dzus rail position.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 11.06.01
CERT. NO.: SH05-11
ISSUE NO.: 1

A	NEW ISSUE		11.06.01
REV.	DESCRIPTION	BY	DATE
DESIGN.			
DRAWN			
CHECKED			
MFG. APPR.	N/A		
APPROVED			
DE APPR.			
DATE	11.06.01		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. DSI 9476	REV. A SHEET 1 OF 7
TITLE DZUS RAIL BRACE KIT	SCALE NTS
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Option 2 - Install D212-722-013 Dzus Rail Brace Kit as follows if pedestal has not been removed from aircraft:

Note: The existing PR35 center dzus rails will need to be removed and re-worked to a correct length in order to install the D212-722-013 Dzus Rail Brace Kit.

CAUTION: Alignment of the parts is critical to a successful installation. It is strongly recommended that the parts be clamped together before drilling and then clecoed together before riveting.

- 1) Remove the rivets securing the PR35 center dzus rails from the existing dzus rail brace. Remove dzus rail.
- 2) Without removing it, trim the existing left dzus rail brace, as shown in Figure 4 (Sheet 6). Trim the existing right dzus rail brace 2.25" longer. See Note 1 Figure 4 (Sheet 6).
- 3) Trim D3986-3 braces so that when matched with the existing dzus rail braces the original D3986-3 length is maintained.
- 4) Clamp and cleco the D3986-1 angle, the trimmed D3986-3 braces and PR35 dzus rail together as shown in Figure 3 (Sheet 5).
- 5) Install blanking plates (Figure 5, Sheet 7) to position the PR35 dzus rails in the correct position.
- 6) Transfer drill $\varnothing 0.129$ (#30 drill) the necessary holes (4 typ) from PR35 dzus rail thru D3986-3 braces. See Figure 3, (Sheet 5), Note 1.
- 7) Deburr holes and reassemble using clecos.
- 8) Transfer drill 4x $\varnothing 0.129$ (#30 drill) holes from D3986-3 braces to D3986-1 angle. See Figure 3, (Sheet 5), Note 2.
- 9) Deburr holes and reassemble using clecos.
- 10) Transfer drill 4x $\varnothing 0.129$ (#30 drill) holes from D3986-1 angle to aircraft console. See Figure 3, (Sheet 5), Note 3.
- 11) Deburr holes, dimple D3986-1 angle and aircraft console and reassemble using clecos.
- 12) Re-install blanking plates (Figure 5, Sheet 7) and verify correct position of PR35 dzus rails
- 13) Install MS20470AD4 and MS20426AD4 rivets as shown in Figure 3 (Sheet 5) in the same order as the holes were drilled, maintaining the PR35 dzus rail position.

WEIGHT AND BALANCE

Compliance with this DSI has no effect on the aircraft weight and balance.

PARTS LIST

QTY. -013	PART NUMBER	DESCRIPTION
X	D212-722-013	DZUS RAIL BRACE KIT
1	D3986-1	ANGLE
2	D3986-3	BRACE

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

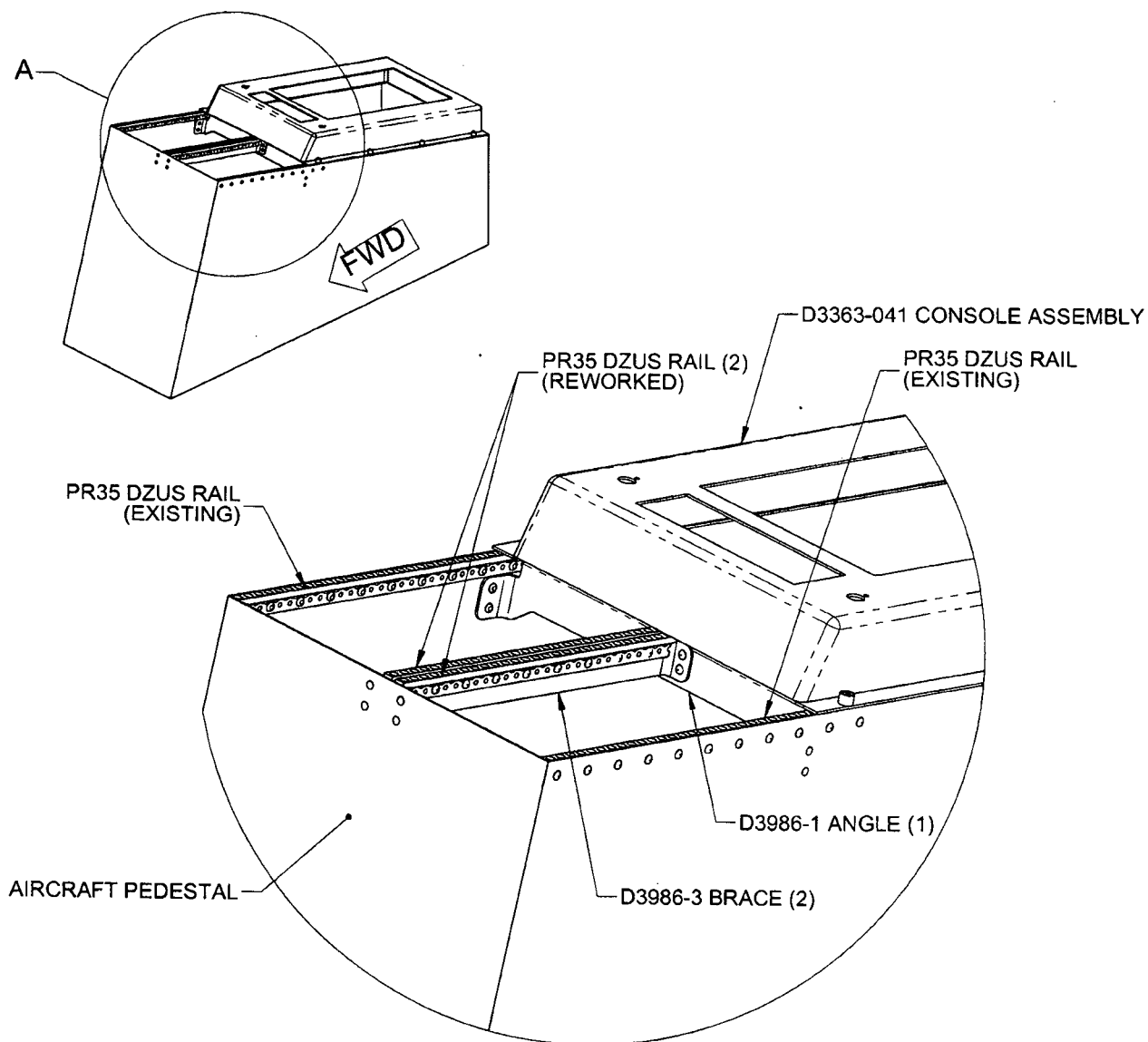
APPROVED

BY:

D. SHEPHERD (DE # 02)

DATE: 11.06.01
CERT. NO.: SH05-11
ISSUE NO.: 1

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9476	SHEET 2 OF 7
APPROVED		TITLE	SCALE
DE APPR.		DZUS RAIL BRACE KIT	NTS
DATE	11.06.01	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
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DETAIL A

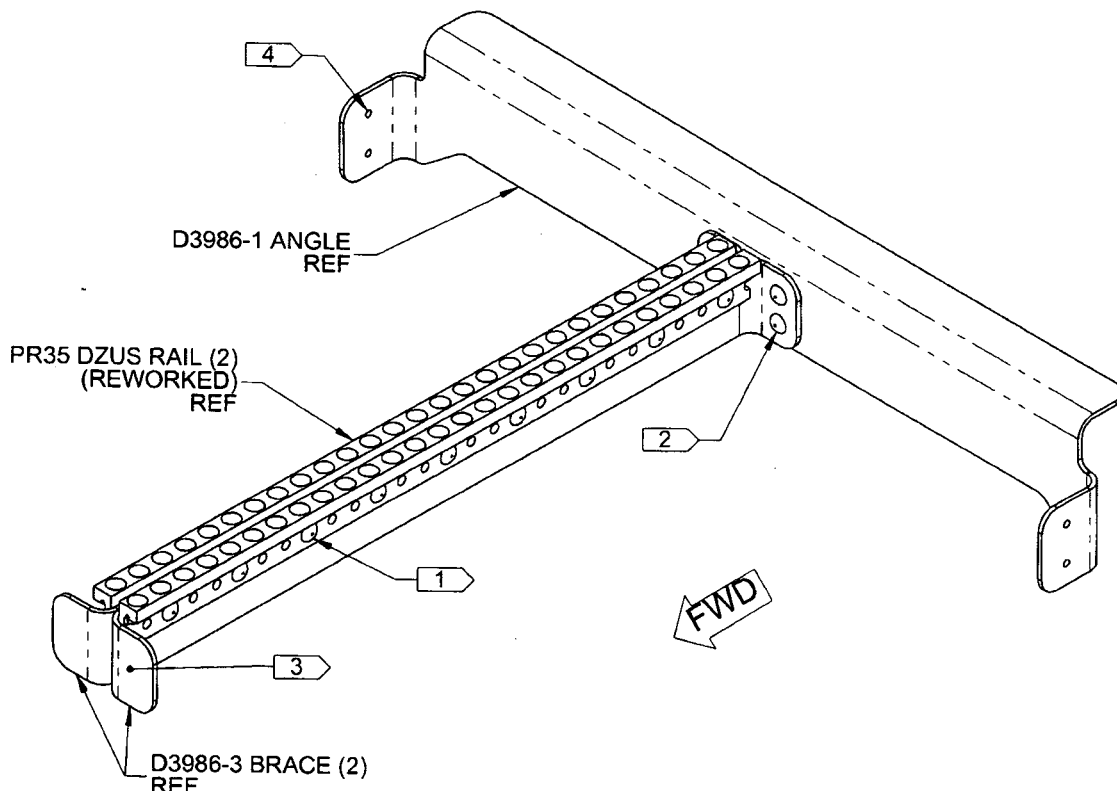
FIGURE 1: D212-722-013 DZUS RAIL BRACE INSTALLATION

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MFG. APPR.	N/A	DSI 9476	SHEET 3 OF 7
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- 1) CONFIRM THAT DZUS RAIL AND BRACE ARE IN CORRECT POSITION AND TRANSFER DRILL $\varnothing 0.129$ (#30 DRILL) FROM PR35 DZUS RAIL THRU D3986-3 BRACES. INSTALL MS20470AD4 RIVETS, 9 PL TYP
- 2) CONFIRM THAT DZUS RAIL AND BRACE ARE IN CORRECT POSITION AND TRANSFER DRILL 4X $\varnothing 0.129$ (#30 DRILL) HOLES FROM D3986-3 BRACE TO D3986-1 ANGLE. INSTALL MS20470AD4 RIVETS, 4 PL
- 3) CONFIRM THAT DZUS RAIL AND BRACE ARE IN CORRECT POSITION AND TRANSFER DRILL 4X $\varnothing 0.129$ (#30 DRILL) FROM AIRCRAFT CONSOLE TO D3986-3 BRACES. DIMPLE D3986-3 BRACES AND INSTALL MS20426AD4 RIVETS, 4 PL.
- 4) CONFIRM THAT DZUS RAIL AND BRACE ARE IN CORRECT POSITION AND TRANSFER DRILL 4X $\varnothing 0.129$ (#30 DRILL) FROM D3986-1 ANGLE TO AIRCRAFT CONSOLE. DIMPLE D3986-1 ANGLE AND AIRCRAFT CONSOLE AND INSTALL MS20426AD4 RIVETS, 4 PL

FIGURE 2: D212-722-013 DZUS RAIL BRACE INSTALLATION - OPTION 1
(PEDESTAL REMOVED FROM AIRCRAFT)

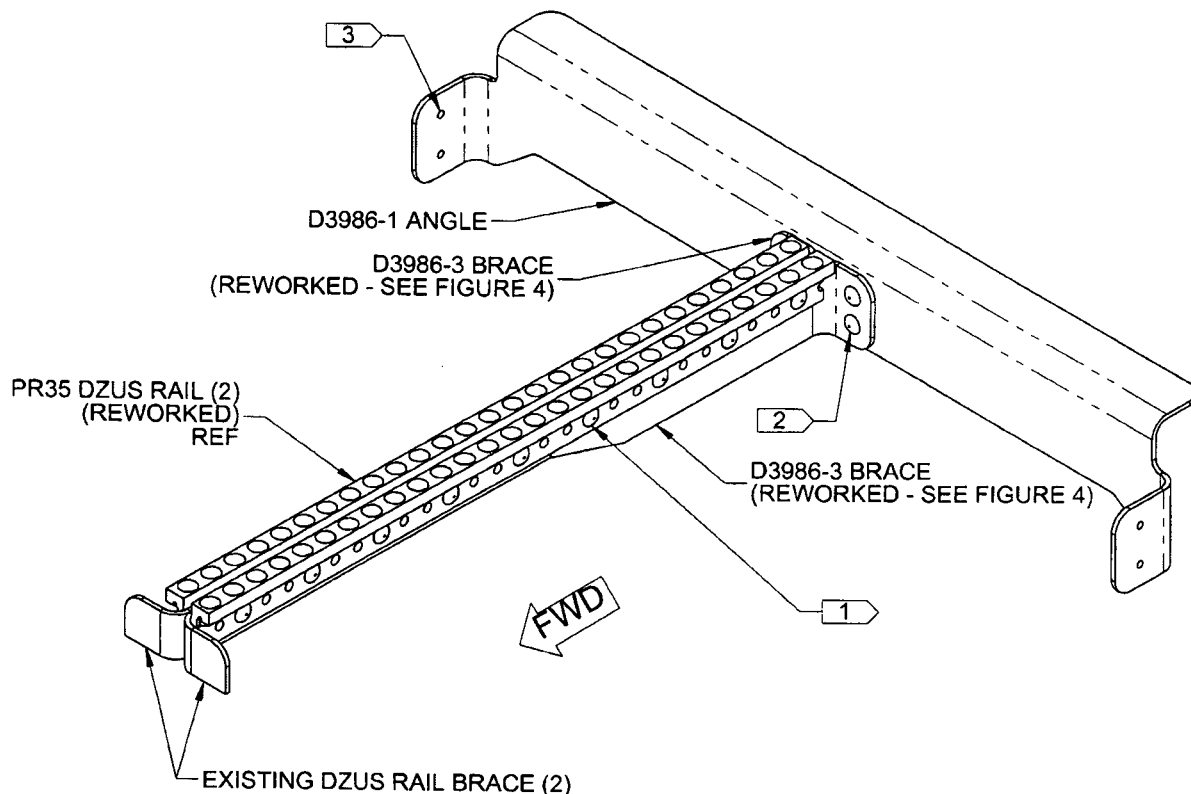
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DAO # 01-O-01

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BY: *[Signature]*
D. SHEPHERD (DE # 02)

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MFG. APPR.	N/A	DSI 9476	SHEET 4 OF 7
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	DZUS RAIL BRACE KIT	NTS
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- 1) CONFIRM THAT DZUS RAIL AND BRACE ARE IN CORRECT POSITION AND TRANSFER DRILL (4 PL TYP) $\varnothing 0.129$ (#30 DRILL) FROM PR35 DZUS RAIL THRU D3986-3 BRACES. INSTALL MS20470AD4 RIVETS, 9 PL TYP
- 2) CONFIRM THAT DZUS RAIL AND BRACE ARE IN CORRECT POSITION AND TRANSFER DRILL 4X $\varnothing 0.129$ (#30 DRILL) HOLES FROM D3986-3 BRACE TO D3986-1 ANGLE. INSTALL MS20470AD4 RIVETS, 4 PL
- 3) CONFIRM THAT DZUS RAIL AND BRACE ARE IN CORRECT POSITION AND TRANSFER DRILL 4X $\varnothing 0.129$ (#30 DRILL) FROM D3986-1 ANGLE TO AIRCRAFT CONSOLE. DIMPLE D3986-1 ANGLE AND AIRCRAFT CONSOLE AND INSTALL MS20426AD4 RIVETS, 4 PL

FIGURE 3: D212-722-013 DZUS RAIL BRACE INSTALLATION - OPTION 2
(PEDESTAL NOT REMOVED FROM AIRCRAFT)

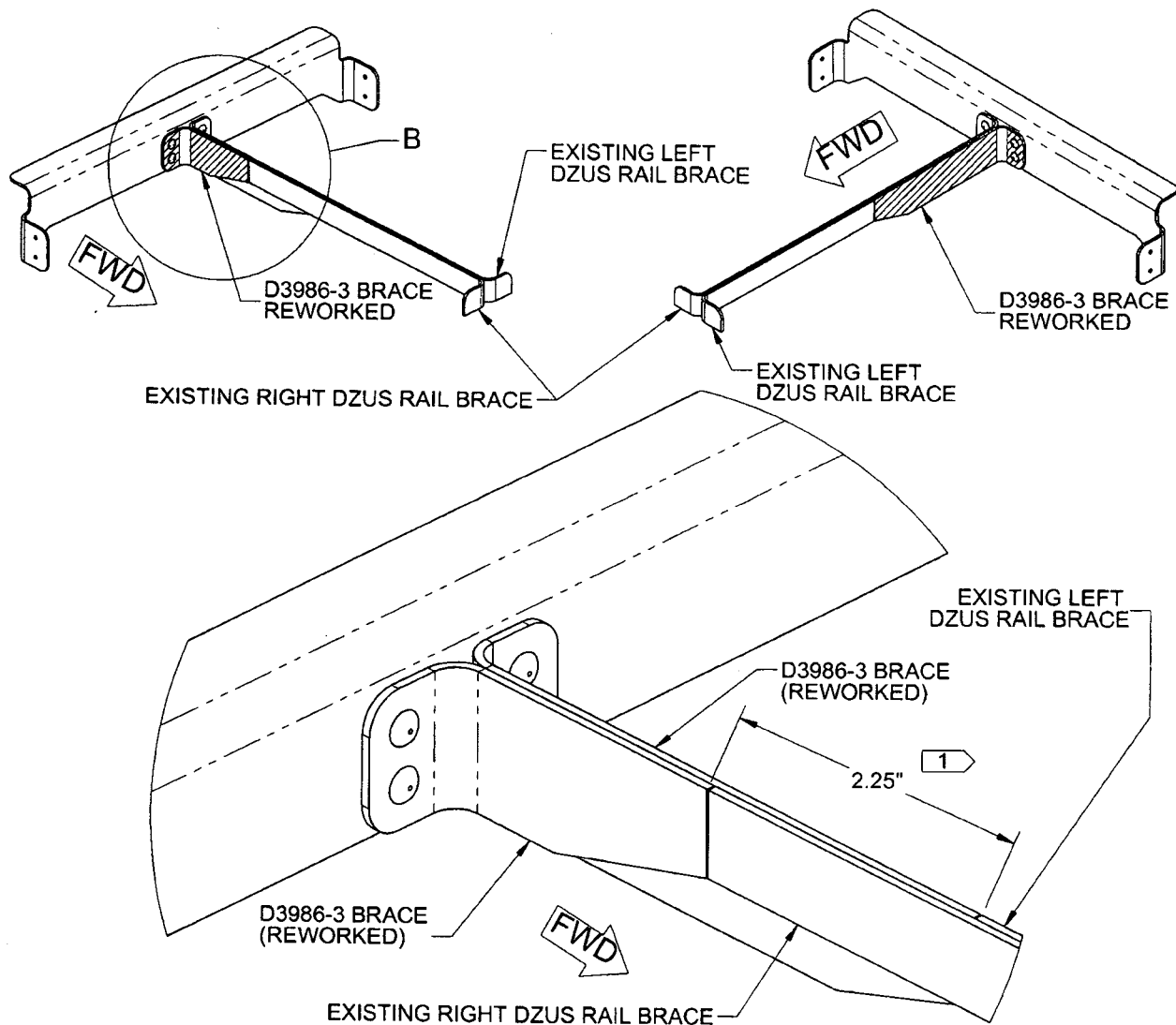
CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

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BY: *[Signature]*
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APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	DZUS RAIL BRACE KIT	NTS
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DETAIL B

- 1) TRIM EXISTING LEFT DZUS RAIL BRACE SO THAT THE END IS HALF WAY BETWEEN EXISTING RIVET HOLES. TRIM EXISTING RIGHT DZUS RAIL BRACE 2.25" LONGER

FIGURE 4: EXISTING DZUS RAIL BRACE TRIMMING DETAIL - OPTION 2
(REWORKED DZUS RAILS AND RIVETS NOT SHOWN FOR CLARITY)

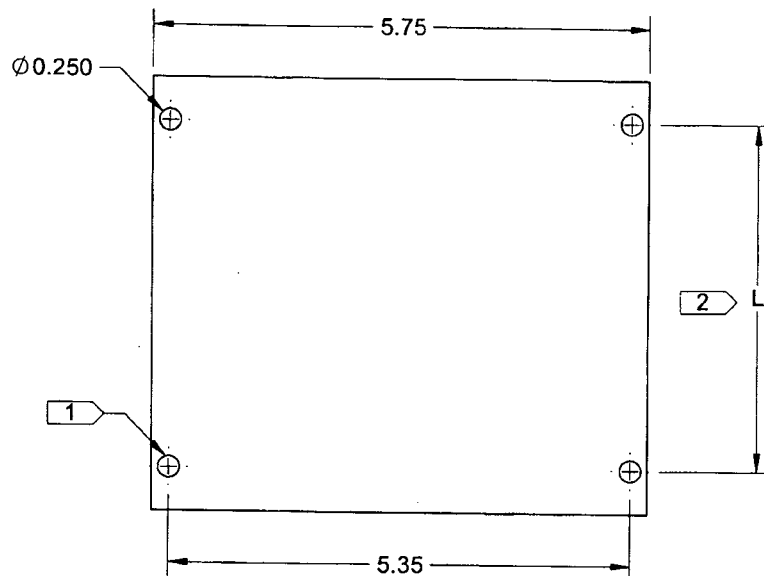
CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

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- 1) INSTALL DZUS FASTENERS, 4 PL TYP
- 2) DIMENSION "L" IS MIN 4". MUST BE DIVISIBLE BY 0.375

FIGURE 5: BLANKING PLATE

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Option 2 - Install D212-722-013 Dzus Rail Brace Kit as follows if pedestal has not been removed from aircraft:

Note: The existing PR35 center dzus rails will need to be removed and re-worked to a correct length in order to install the D212-722-013 Dzus Rail Brace Kit.

CAUTION: Alignment of the parts is critical to a successful installation. It is strongly recommended that the parts be clamped together before drilling and then clecoed together before riveting.

- 1) Remove the rivets securing the PR35 center dzus rails from the existing dzus rail brace. Remove dzus rail.
- 2) Without removing it, trim the existing left dzus rail brace, as shown in Figure 4 (Sheet 6). Trim the existing right dzus rail brace 2.25" longer. See Note 1 Figure 4 (Sheet 6).
- 3) Trim D3986-3 braces so that when matched with the existing dzus rail braces the original D3986-3 length is maintained.
- 4) Clamp and cleco the D3986-1 angle, the trimmed D3986-3 braces and PR35 dzus rail together as shown in Figure 3 (Sheet 5).
- 5) Install blanking plates (Figure 5, Sheet 7) to position the PR35 dzus rails in the correct position.
- 6) Transfer drill $\varnothing 0.129$ (#30 drill) the necessary holes (4 typ) from PR35 dzus rail thru D3986-3 braces. See Figure 3, (Sheet 5), Note 1.
- 7) Deburr holes and reassemble using clecos.
- 8) Transfer drill 4x $\varnothing 0.129$ (#30 drill) holes from D3986-3 braces to D3986-1 angle. See Figure 3, (Sheet 5), Note 2.
- 9) Deburr holes and reassemble using clecos.
- 10) Transfer drill 4x $\varnothing 0.129$ (#30 drill) holes from D3986-1 angle to aircraft console. See Figure 3, (Sheet 5), Note 3.
- 11) Deburr holes, dimple D3986-1 angle and aircraft console and reassemble using clecos.
- 12) Re-install blanking plates (Figure 5, Sheet 7) and verify correct position of PR35 dzus rails
- 13) Install MS20470AD4 and MS20426AD4 rivets as shown in Figure 3 (Sheet 5) in the same order as the holes were drilled, maintaining the PR35 dzus rail position.

WEIGHT AND BALANCE

Compliance with this DSI has no effect on the aircraft weight and balance.

PARTS LIST

QTY. -013	PART NUMBER	DESCRIPTION
X	D212-722-013	DZUS RAIL BRACE KIT
1	D3986-1	ANGLE
2	D3986-3	BRACE

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: 
D. SHEPHERD (DE # 02)

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